

Application Serial No. 10/747,846  
Reply to Office Action of May 2, 2006

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Docket: CU-3461

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently amended) A method for masking a postamble ringing phenomenon in a DDR SDRAM, the method comprising the steps of:
  - a) storing data, which are applied from a memory controller, in a data input latch through a data buffer and aligning the stored data;
  - b) controlling the data input latch so that the data stored in the data input latch do not change;
  - c) transmitting the data stored in the data input latch to a data input/output detection amplifier after a predetermined time delay; and
  - d) enabling the data input latch to receive new data after the data, which have been transmitted to the data input/output detection amplifier, are transmitted to a global input/output line.
2. (Original) The method as claimed in claim 1, wherein in step b, an enable interval of a signal controlling the data input latch is adjusted so that the data stored in the data input latch do not change.
3. (Original) The method as claimed in claim 2, wherein the signal, which controls the data input latch to prevent the data stored in the data input latch from changing, is generated by a signal which is synchronized with a falling edge of a DQS signal before it is generated.
4. (Currently amended) A method for masking a postamble ringing phenomenon in a

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DDR SDRAM, the method comprising the steps of:

- a) storing data, which are applied as a signal received from a memory controller, in a data input latch through a data buffer and aligning the stored data; and
- b) controlling the data input latch so that the data stored in the data input latch can maintain its data value for a predetermined time interval, before the data stored in the data input latch are transmitted to a global input/output line through a data input/output detection amplifier.

5. (Original) The method as claimed in claim 4, further comprising, after step b, a step of resetting the data input latch so as to revert to a state in which the data input latch can receive new data.

6. (Currently amended) The method as claimed in claim 4 or 5, wherein in step b, an enable interval of a signal controlling the data input latch is adjusted to prevent the data stored in the data input latch from changing during said predetermined time interval.

7. (Currently amended) A method for masking a postamble ringing phenomenon in a DDR SDRAM, the method comprising the steps of:

- a) receiving a DQS signal through a DQS buffer, and receiving a plurality of data, including a first data and second data, through a data input buffer;
- b) storing the DQS signal outputted from the DQS buffer in a DQS latch;
- c) generating a first signal synchronized with a rising edge of the DQS signal, and generating a second signal synchronized with a falling edge of the DQS signal;
- d) storing the first data from among the plurality of data outputted from the

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data input buffer in the data input latch synchronized with a rising edge of the first signal;

e) storing the second data from among the plurality of data outputted from the data input buffer in the data input latch synchronized with a rising edge of the second signal;

f) after a predetermined time interval, transmitting the first data and the second data, which are stored in the data input latch, to a data input/output detection amplifier, synchronized with a falling edge of the second signal; and

g) controlling operation of the data input latch by means of a control signal which is synchronized with the rising edge of the second signal in step e and is then generated.

8. (Original) The method as claimed in claim 7, wherein operation of the DQS latch is masked while the control signal maintains an enabled state at a high level.

9. (Original) The method as claimed in claim 8, wherein the control signal is disabled by a data in a strobe pulse signal which enables the data input/output detection amplifier.

10. (Original) The method as claimed in claim 7, further comprising a step of providing a ringing phenomenon mask section which generates the control signal synchronized with the rising edge of the second signal, that can adjust its own delay time, thereby adjusting an enable interval of the control signal.

11. (Original) An apparatus for masking a postamble ringing phenomenon in a DDR SDRAM, the apparatus comprising:

a data strobe buffer for receiving a data strobe signal from a memory

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controller;

a data strobe latch for latching the data strobe signal outputted from the data strobe buffer;

a data buffer for receiving data applied from a memory controller;

a data latch for latching the data outputted from the data buffer for a predetermined time interval and thereafter, for transmitting the latched data to a data input/output detection amplifier in response to an output signal received from the data strobe latch; and

a ringing phenomenon mask section for controlling the operation of the data latch in response to the output signal of the data strobe latch.

12. (Original) The apparatus as claimed in claim 11, wherein the data strobe signal is a clock signal, the ringing phenomenon mask section includes means to synchronize the control signal with a falling edge of the clock signal and generates the control signal thereafter, so that data transmission from the data buffer to the data latch is masked when the ringing phenomenon mask section is enabled.